

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

ZF FRIEDRICHSHAFEN AG  
88038 Friedrichshafen  
ALLEMAGNE

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NOV 09 2001

GROUP 3600

Date of mailing (day/month/year) 28 June 2001 (28.06.01)	
Applicant's or agent's file reference 7589 WO F RO-RU	IMPORTANT NOTIFICATION
International application No. PCT/EP00/11059	International filing date (day/month/year) 09 November 2000 (09.11.00)

## 1. The following indications appeared on record concerning:

☒ the applicant    ☒ the inventor    ☐ the agent    ☐ the common representative

Name and Address STAUBER, Roland Jupiterstrasse 2 88046 Friedrichshafen Germany	State of Nationality DE	State of Residence DE
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person    ☐ the name    ☒ the address    ☐ the nationality    ☐ the residence

Name and Address STAUBER, Roland Schmalholzstrasse 3/3 88048 Friedrichshafen Germany	State of Nationality DE	State of Residence DE
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

## 3. Further observations, if necessary:

## 4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  Ingrid Aulich
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
25 May 2001 (25.05.2001)

PCT

(10) International Publication Number  
WO 01/35806 A1

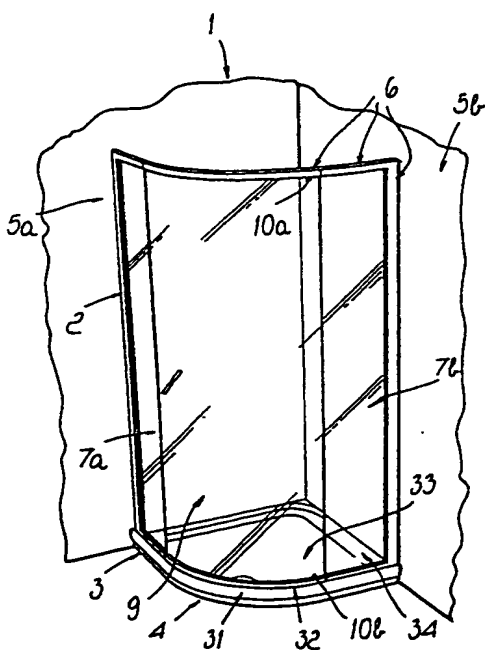
- (51) International Patent Classification<sup>7</sup>: A47K 3/36 (74) Agent: MODIANO, Guido; Modiano & Associati, Via Meravigli, 16, I-20123 Milan (IT).
- (21) International Application Number: PCT/EP00/11159 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (22) International Filing Date:  
10 November 2000 (10.11.2000) (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
TV99A000127 18 November 1999 (18.11.1999) IT
- (71) Applicant (*for all designated States except US*): CALIBE S.R.L. [IT/IT]; Via Provinciale, 116, I-40056 Crespellano (IT).
- (72) Inventor; and
- (75) Inventor/Applicant (*for US only*): MONTANARI, Filippo [IT/IT]; Via Provinciale, 116, I-40056 Crespellano (IT).

**Published:**

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SHOWER APPARATUS



(57) Abstract: A shower apparatus, comprising an enclosure or a door (2) and a shower tray (3), the enclosure or door and the shower tray being mutually disconnected and the enclosure or door having means for adjustable connection to walls (5a, 5b) that form a cubicle (4) that accommodates the apparatus.

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## SHOWER APPARATUS

### Technical Field

The present invention relates to a shower apparatus.

### Background Art

5 Shower apparatuses are currently in use being usually constituted by an enclosure made of a rigid material, for example, glass, Plexiglas or other translucent or transparent material, which is placed for example in a corner of a suitable room or in a recess or along a wall.

10 The enclosure is therefore for example fixed on two sides to the walls of the room and rests in a downward region on a shower tray.

Resting on the shower tray occurs according to various solutions, since the lower end of the enclosure can rest on the entire upper rim of the shower tray or only on a part thereof, for example by using, on the region adjacent to the door, spacer pins which are arranged between the lower end of the enclosure and the upper rim of the shower tray.

15 The enclosure is usually constituted by a frame whereto a door is slidably fixed or hinged.

The door can therefore be for example coupled in an upward region to the enclosure frame so that it can slide and can be guided in a downward region on a seat which is rigidly coupled above the upper rim of the shower tray.

As an alternative, the door can slide by resting, on a suitable gasket, on the upper rim of the shower tray.

25 The main drawback of these conventional shower apparatuses is that unsightly and scarcely hygienic deposits of scale and other matter, accumulations of dirt, mold and bacteria due to stagnation of water after use often form in the points of contact between the enclosure and the shower tray.

30 These stagnations are often due to difficulty in being able to dry and clean interstices that are present proximate to these resting points, such

interstices being also awkward to access because they are arranged at floor level.

Another drawback of conventional shower apparatuses is that they can require, in the resting regions, the presence of gaskets and/or silicone seals which, in addition to be prone to deterioration and unsightly, worsen the noted drawbacks due to water stagnation and entail an additional intervention during installation.

Another drawback consists in that water can escape due to the contact, which acts as a path for connection to the outside of the shower cubicle, between the enclosure, which is internally wet, and the rim of the shower tray, which is adjacent to the flooring that lies outside the shower cubicle.

Another drawback of conventional shower apparatuses is that they have a complicated adjustment, by means of shims, of the position of the enclosure with respect to the walls, this adjustment being necessary because the walls are never perfectly vertical and perpendicular to the floor.

#### Disclosure of the Invention

The aim of the present invention is to solve the above-noted problems, eliminating the drawbacks of the cited prior art, by providing a shower apparatus which is easy and straightforward to install and clean, avoiding the presence of water stagnation regions which cause, for example, the formation of scale deposits.

Within this aim, an object of the invention is to provide a shower apparatus which prevents the escape from the shower cubicle even of minimal amounts of water, thus avoiding the need to subsequently dry up the escaped water and, even more importantly, avoiding the possibility of accidents caused by the fact that someone slips on said water.

Another object of the invention is to provide a shower apparatus which achieves the intended aim and objects without requiring the use of unsightly silicone seals and/or gaskets, which would also help to worsen the above-noted problems.

Another object of the invention is to provide a shower apparatus which is structurally simple and has low manufacturing costs.

This aim and these and other objects which will become better apparent hereinafter are achieved by a shower apparatus, comprising an enclosure or a door and a shower tray, characterized in that said enclosure or door and said shower tray are mutually disconnected, said enclosure or door having means for adjustable connection to the walls that form the cubicle for accommodating the apparatus.

#### Brief Description of the Drawings

Further characteristics and advantages of the present invention will become better apparent from the following detailed description of a particular embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a perspective view of the shower apparatus according to the present invention;

Figure 2 is a perspective view of a detail of the wall anchoring and adjustment system;

Figure 3 is a sectional plan view of a detail of the wall anchoring and adjustment system at minimum extension;

Figure 4 is a sectional plan view of a detail of the wall anchoring and adjustment system at maximum extension;

Figure 5 is a sectional exploded plan view of the elements that compose the anchoring and adjustment system;

Figure 6 is a plan view of the invention;

Figure 7 is a side view of the invention; and

Figure 8 is a sectional side view of the shower tray, taken along a plane which is parallel to a wall.

#### Ways of carrying out the Invention

With reference to the figures, the reference numeral 1 designates a shower apparatus which comprises an enclosure or door 2 and a shower tray

3.

The enclosure 2 is arranged in a shower cubicle, designated by the reference numeral 4, which in this embodiment is delimited by two vertical walls 5a and 5b being advantageously perpendicular one another so as to form a shower corner which accommodates the apparatus 1.

The enclosure 2, seen in plan view, advantageously has a side which is shaped like a circular arc with the convexity facing outward; the enclosure is constituted by a frame, designated by the reference numeral 6, having a peripheral seat 50 inside which two glazing panels 7a and 7b are preferably arranged. The panels are advantageously rectangular and flat and are each arranged adjacent to the walls 5a and 5b.

An opening, designated by the reference numeral 8, is provided between the glazing panels 7a and 7b, advantageously in a central position, and is adapted to accommodate a door 9 which is preferably shaped like a circular arc and is coupled to the frame 6, preferably by means of two vertical hinges 10a and 10b which protrude from the frame along the same axis.

The apparatus 1 has appropriate means for the adjustable connection of the enclosure 2 to the walls 5a and 5b.

Since the connection means are identical for each wall, only the means for connection to the wall 5b are described for the sake of simplicity.

The connection means are constituted by a post, designated by the reference numeral 11b, which rests vertically on the wall 5b; by a first profiled element 12b, which is L-shaped and rigidly coupled to the frame 6; by first connection screws 13b for the removable connection of the post 11b to the wall 5b; and by second adjustment screws 14b for the adjustable connection of the mutual position between frame 6 and post 11b.

The post 11b is constituted by a second profiled element, designated by the reference numeral 15b, having advantageously a C-shaped transverse cross-section which has a base, designated by the reference numeral 17b, and two wings 18b which advantageously have the same dimensions and

protrude, in the same direction, toward the wall 5b.

The base 17b of the second profiled element 15b is advantageously arranged parallel to the wall 5b and has first holes, not shown, which are adapted for detachable connection, by means of the first connecting screws  
5 13b, to the wall 5b, in which adapted wall anchors are associated beforehand.

Locking elements are associated with the post 11b and are constituted by nuts 19b which are accommodated within the wings 18b and are provided with second threaded holes 20b which have a horizontal axis and are  
10 arranged at similar third holes 21b which are formed in the base 17b of the second profiled element, in a staggered position with respect to the first holes.

The second adjustment screw 14b has a threaded stem 22b which can be inserted, through said third and second holes 21b and 20b, in the locking  
15 element or nut 19b, and a head, designated by the reference numeral 23b, on the lateral surface 24b whereof there is an annular milling 25b.

The first profiled element 12b, which has an advantageously L-shaped cross-section, is arranged so as to have a first wing 26b being approximately parallel to the base 17b of the second profiled element and a second wing  
20 27b being advantageously perpendicular to the first wing 26b.

At least one of the two wings 26b and 27b has surfaces for coupling, advantageously by welding or gluing, to the frame 6.

Two or more vertical slots, designated by the reference numeral 28b, are formed in the first wing 26b and are advantageously symmetrical with  
25 respect to a horizontal central plane and are blended, by means of a lateral milling 51, with the free peripheral edge 52 of the wing 26b.

The dimensions of the lateral milling 51 are such as to allow the insertion and sliding of the head 23b of the second adjustment screw 14b, so as to arrange the annular milling 25b at the thickness of the first wing 26b.

30 A lateral gap, designated by the reference numeral 29b and formed

between the first wing 26b and the base 17b of the post 11b, allows access to the head 23b of the second adjustment screw 14b so as to allow partial screwing-unscrewing thereof for optimum positioning and centering of the enclosure 2.

5 A strip, designated by the reference numeral 30b, is advantageously magnetic and is substantially rectangular, and allows the connection between the first profiled element 12b and the post 11b, thus closing the lateral gap 29b.

Below the enclosure 2, and spaced from the lower peripheral rim 53  
10 thereof, the shower tray 3 is rested on the ground and has, at least at an arc-like side designated by the reference numeral 31, a peripheral rim 32 which is raised with respect to an internal useful surface designated by the reference numeral 33.

The raised peripheral rim 32 has, in a transverse cross-section, a  
15 configuration which curves upward and increases in height advantageously in the part that lies under the door 9.

An internal channel 34 for collecting water is adjacent to the peripheral rim 32 and surrounds the internal useful surface 33.

The collection channel 34, arranged downward with respect to the lower  
20 peripheral rim 53 of the enclosure 2, is inclined on the plane in order to convey the water to a drain, designated by the reference numeral 35, which is advantageously arranged along the channel 34 proximate to the door 9.

Use is thus as follows: with reference to Figure 1, the first assembly operation consists in positioning and coupling, by way of conventional  
25 methods, the shower tray 3 to the floor of the cubicle 4 that accommodates the apparatus 1, which is conveniently arranged so as to rest laterally against the respective walls 5a and 5b.

Then the two posts are fixed, by means of the first connecting screws, to the respective walls 5a and 5b, so that the posts are conveniently arranged  
30 within the arc-like side 31 of the shower tray 3.



Then the enclosure 2 is assembled on the ground, associating the frame 6 with the glazing panels 7a and 7b and with the door 9.

Since the enclosure 2 is fully symmetrical, it can be turned upside down so as to determine at will the direction in which the door 9 opens.

5 The enclosure 2 is thus installed so as to be suspended on both posts by arranging the vertical slots in the respective annular millings formed in the heads of the adjustment screws.

It is thus possible to adjust the position and centering of the enclosure 2 with respect to the walls 5a and 5b by partially screwing or unscrewing the  
10 adjustment screws.

This intervention is allowed after installation because access to the adjustment screws occurs by means of the two lateral gaps that are present between the first profiled elements and the respective posts.

The gaps can be closed, once centering has been performed, by means of  
15 the appropriately provided strips, so as to protect the inside of the lateral gaps from water or any dirt and at the same time ensure an effective aesthetic impact.

During use, water flows by gravity from the internal surfaces of the enclosure 2 toward the lower peripheral rim 53 thereof, drips from there  
20 inside the shower tray 3, and is conveyed, by means of a system of slopes, first into the channel 34 and then into the drain 35.

It has thus been observed that the invention has achieved the intended aim and objects, a shower apparatus having been provided which is simple to install and easy and straightforward to clean, since there is no contact  
25 between the shower enclosure, which is suspended from two lateral posts, and the underlying shower tray.

The invention is of course susceptible of numerous modifications and variations, all of which are within the scope of the same inventive concept.

The materials used, as well as the dimensions that constitute the  
30 individual components of the invention, may of course be more pertinent

according to specific requirements.

The disclosures in Italian Patent Application No. TV99A000127 from which this application claims priority are incorporated herein by reference.

CLAIMS

1. A shower apparatus, comprising an enclosure or a door and a shower tray, characterized in that said enclosure or door and said shower tray are mutually disconnected, said enclosure or door having means for adjustable connection to the walls that form a cubicle for accommodating said apparatus.

2. The apparatus according to claim 1, characterized in that said enclosure, which has, in plan view, a side being shaped like a circular arc with the convexity facing outward, is constituted by a frame having a peripheral seat inside which it is possible to arrange laterally two glazing panels which are rectangular and flat and are arranged adjacent to said walls.

3. The apparatus according to claims 1 and 2, characterized in that between said glazing panels there is an opening which is adapted to accommodate a door which is shaped like a circular arc and is coupled to said frame by means of two vertical hinges which protrude from said frame along the same axis.

4. The apparatus according to claims 1 and 3, characterized in that said adjustable connection means are constituted by two vertical posts, each of which rests in a rear region against one of said walls; by a first profiled element, which is L-shaped and is rigidly coupled to said frame; by first connection screws for the detachable connection of said posts to said walls; and by second adjustment screws for the adjustable connection of the mutual position of said frame and said posts.

5. The apparatus according to claims 1 and 4, characterized in that each one of said posts is constituted by a second profiled element, which has a C-shaped cross-section which forms a base and two wings, which advantageously have the same dimensions and protrude in the same direction toward said wall.

6. The apparatus according to claims 1 and 5, characterized in that said

base of said second profiled element is arranged parallel to said wall and has first holes for detachable connection, by means of said first connection screws, to said wall, in which adapted wall anchors are associated beforehand.

5        7. The apparatus according to claims 1 and 6, characterized in that locking elements are associated with each one of said posts and are constituted by nuts which are accommodated within said wings and are provided with second threaded holes whose axis is arranged horizontally, said locking elements being arranged at similar third holes formed in said  
10 base of said second profiled element in a staggered position with respect to said first holes.

8. The apparatus according to claims 1 and 7, characterized in that said second adjustment screw has a threaded stem which can be inserted, through said third and second holes, in said locking element or nut, and a head on  
15 the lateral surface whereof there is an annular milling.

9. The apparatus according to claims 1 and 8, characterized in that said first profiled element, which advantageously has an L-shaped cross-section, is arranged so as to have a first wing which is arranged approximately parallel to said base of said second profiled element and a second wing  
20 which is arranged at right angles to said first wing.

10. The apparatus according to claims 1 and 9, characterized in that at least one of said first and second wings has surfaces for coupling to said frame.

11. The apparatus according to claims 1 and 10, characterized in that two  
25 or more vertical slots are formed in said first wing, are symmetrical with respect to a central horizontal plane, and are blended, by means of a lateral milling, with the free peripheral edge of said first wing.

12. The apparatus according to claims 1 and 11, characterized in that the dimensions of said lateral milling are such as to allow the insertion and  
30 sliding of said head of said second adjustment screw so as to arrange said

annular milling at the thickness of said first wing.

13. The apparatus according to claims 1 and 12, characterized in that it has, between each one of said first wings and each one of said bases of said posts, a lateral gap for accessing said head of said second adjustment screw, so as to allow the partial screwing-unscrewing thereof for optimum positioning and centering of said enclosure.

14. The apparatus according to claims 1 and 13, characterized in that it has a strip, which is magnetic and substantially rectangular, for the connection of each one of said first profiles to each one of said posts, so as to allow to close said lateral gap.

15. The apparatus according to one or more of the preceding claims, characterized in that said shower tray, rested on the ground below said enclosure and spaced from the lower peripheral rim thereof, has a peripheral rim which is raised with respect to an internal usable surface.

16. The apparatus according to claims 1 and 15, characterized in that said raised peripheral rim is curved upward in transverse cross-section, said curvature increasing in height in the part below said enclosure or door.

17. The apparatus according to claims 1 and 16, characterized in that said raised peripheral rim of said shower tray is arranged externally with respect to said lower peripheral rim of said enclosure and has a height from the ground which is greater than the distance from the ground of said lower peripheral rim of said enclosure.

18. The apparatus according to claims 1 and 17, characterized in that it has, inside said peripheral rim of said shower tray, a water collection channel which is arranged below said lower peripheral rim of said enclosure and surrounds said usable surface.

19. The apparatus according to claims 1 and 18, characterized in that said collection channel has, with respect to the horizontal plane, an inclined arrangement in order to convey the water to a drain which is arranged along said channel proximate to said door.

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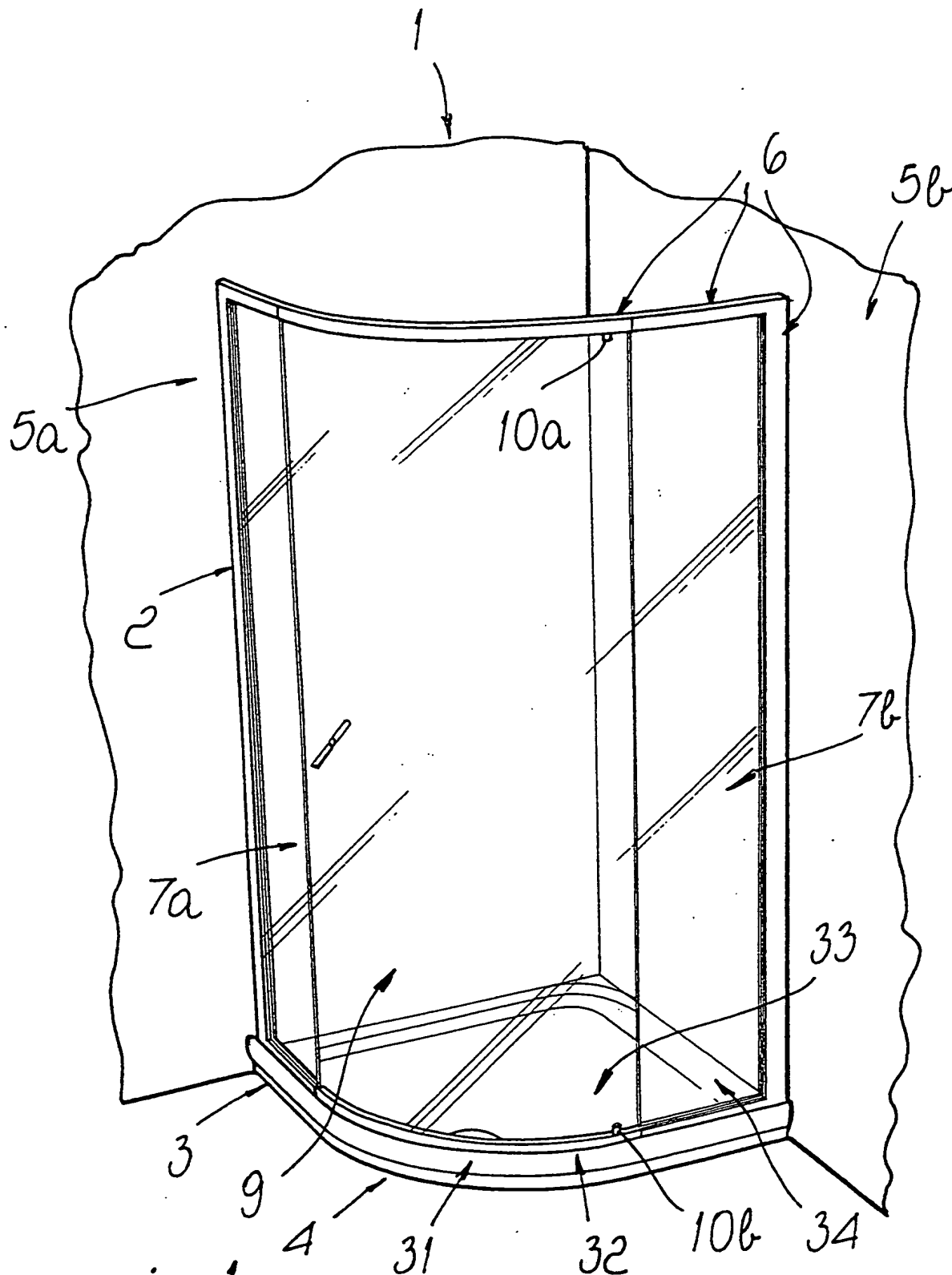
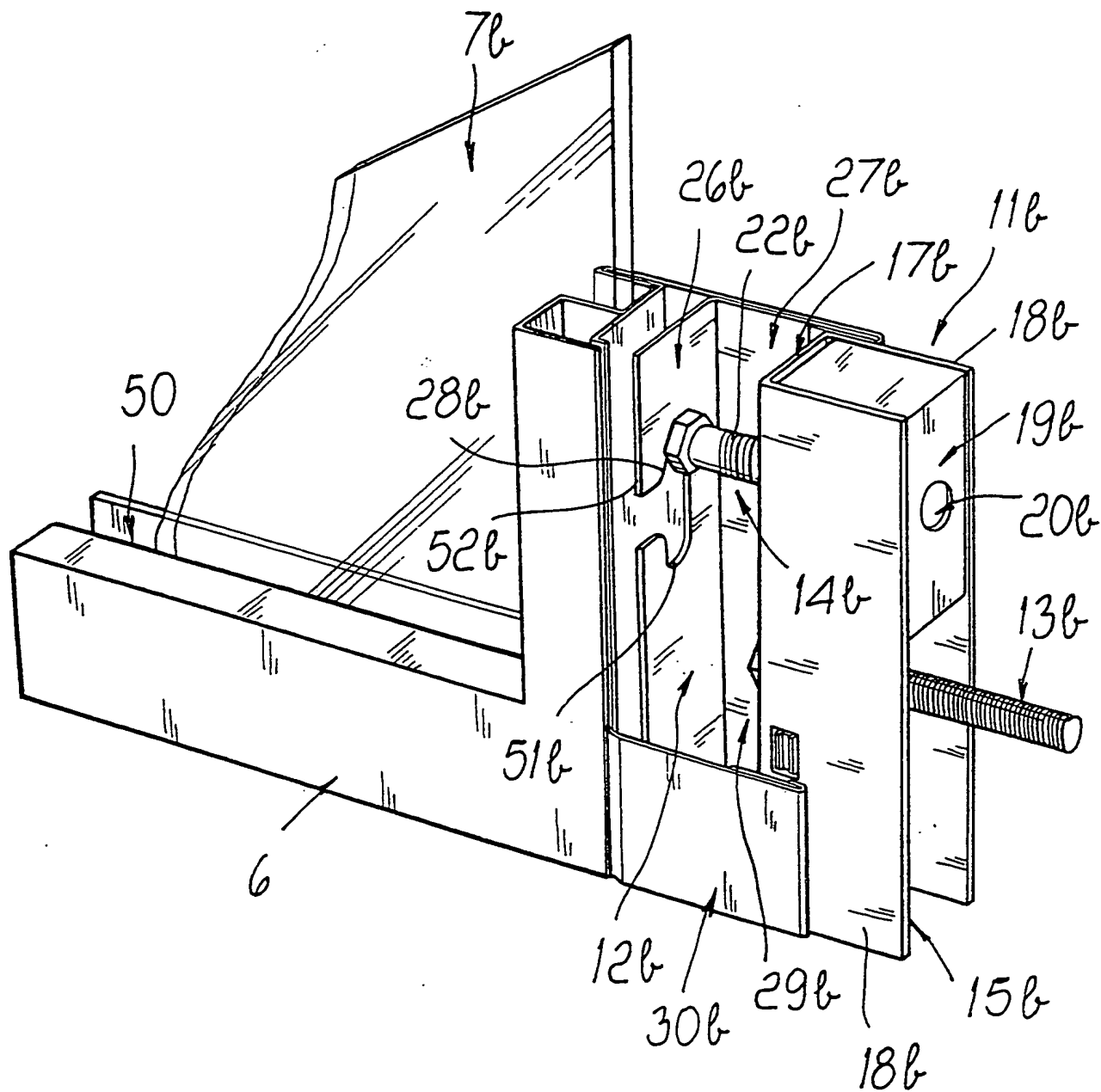


Fig. 1

*Fig. 2*

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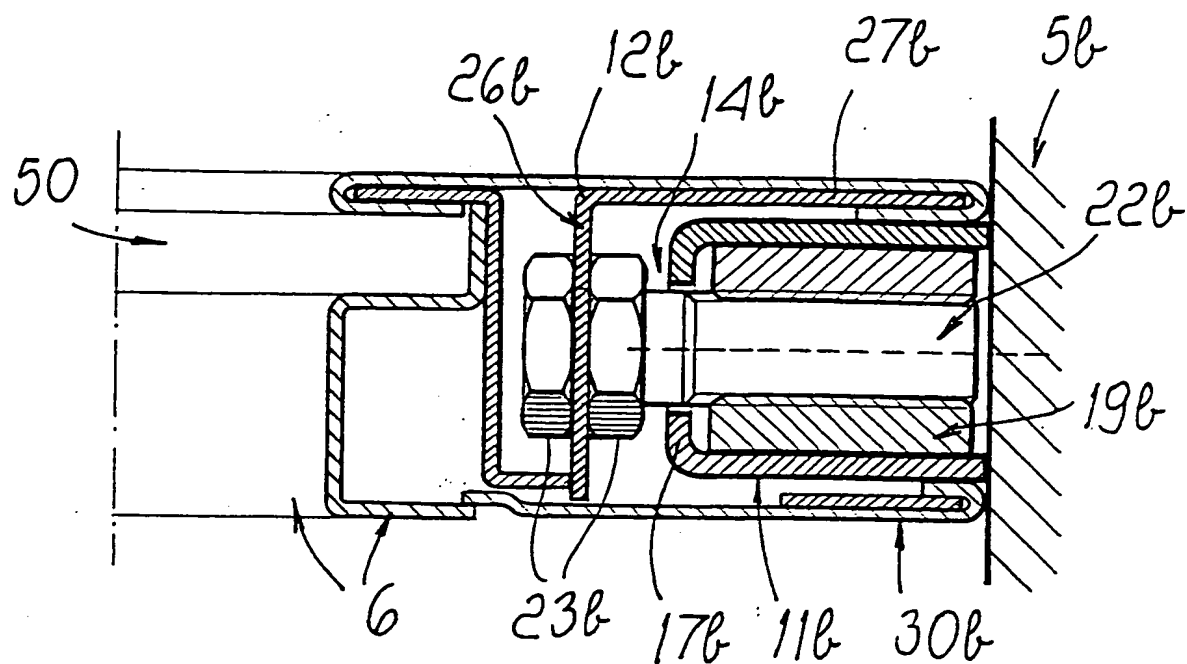


Fig. 3

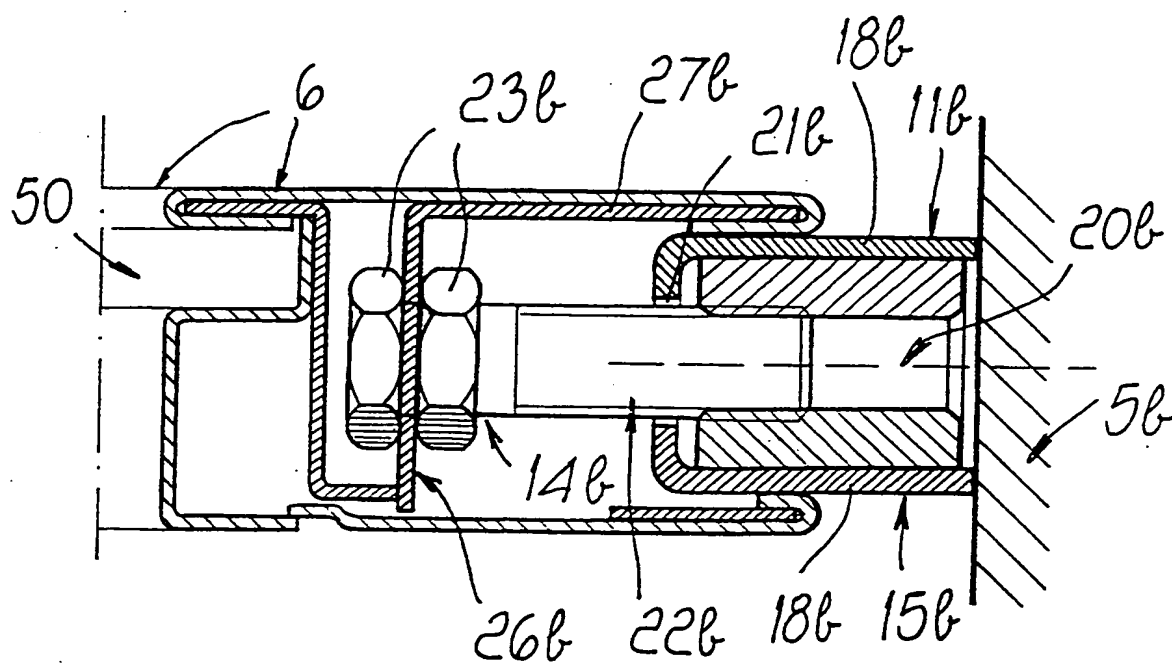
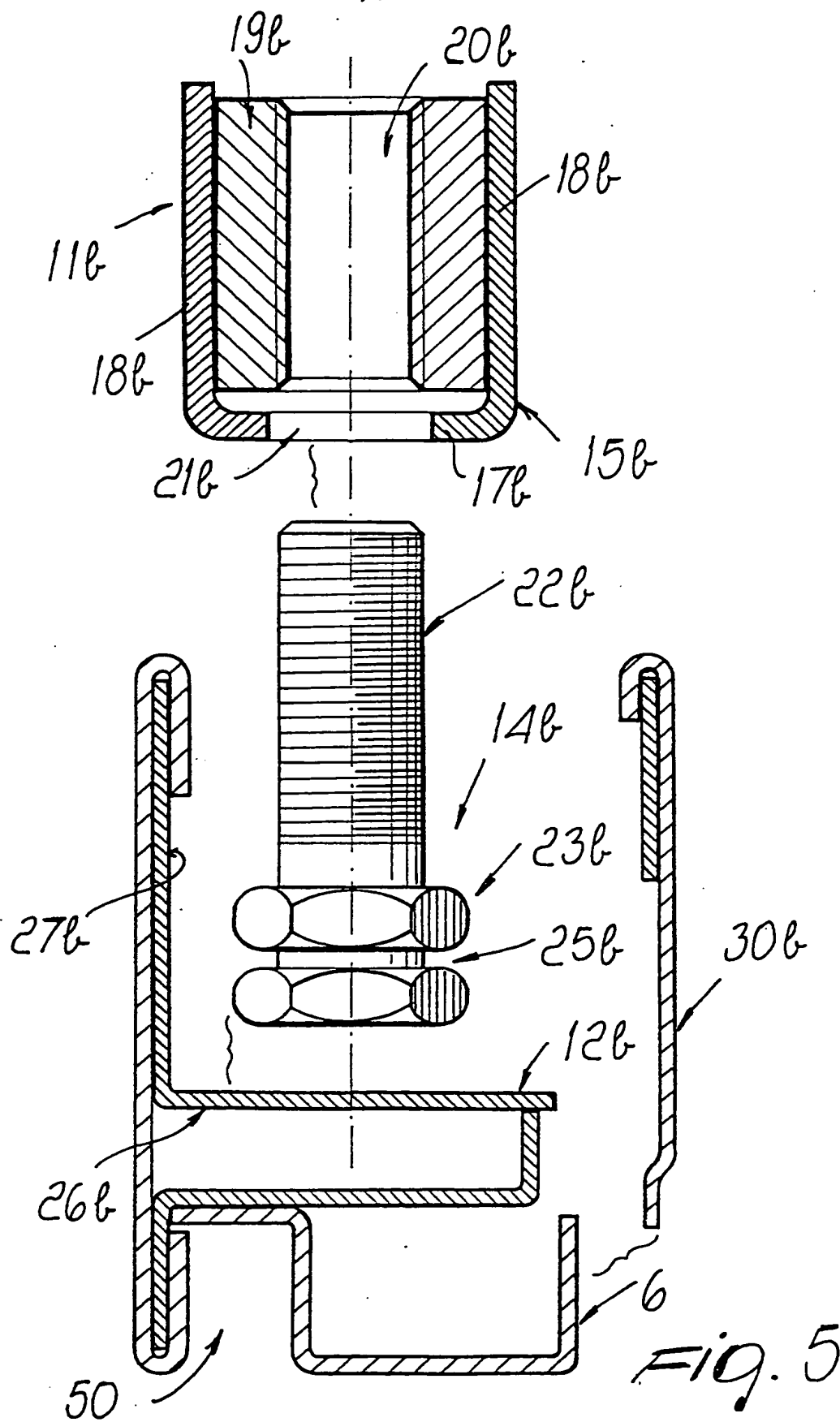
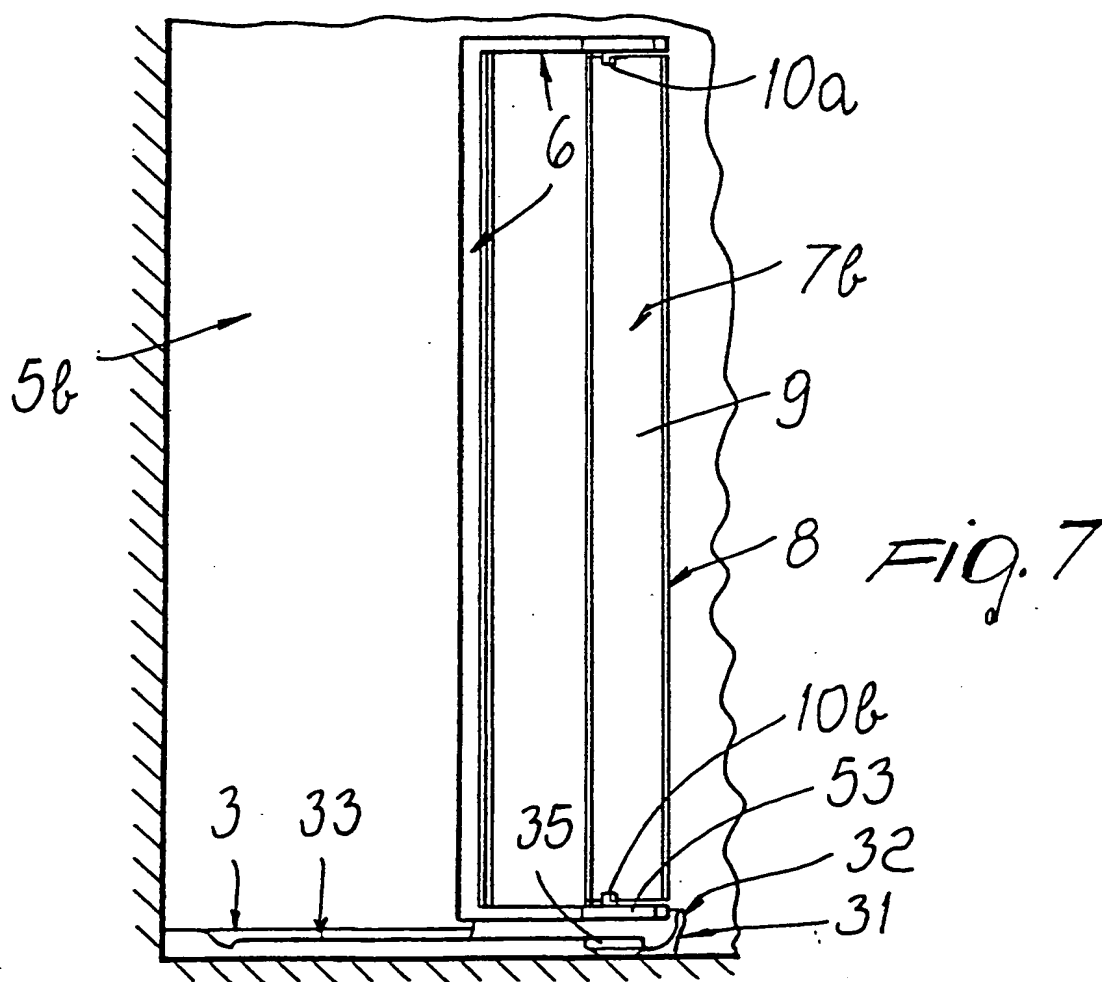
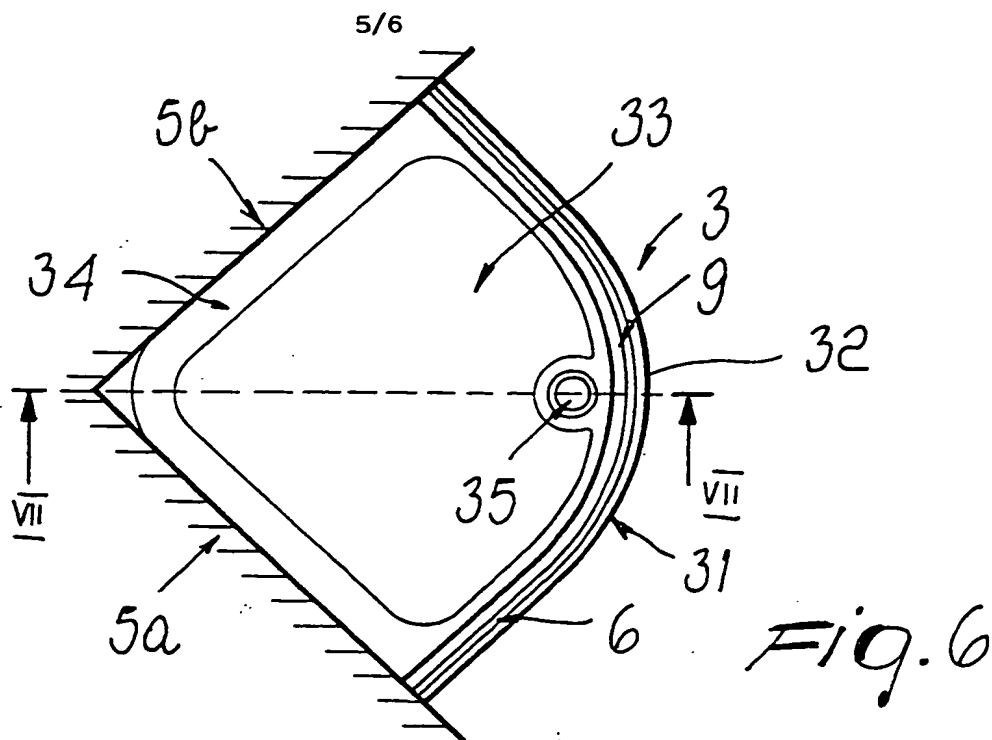


Fig. 4



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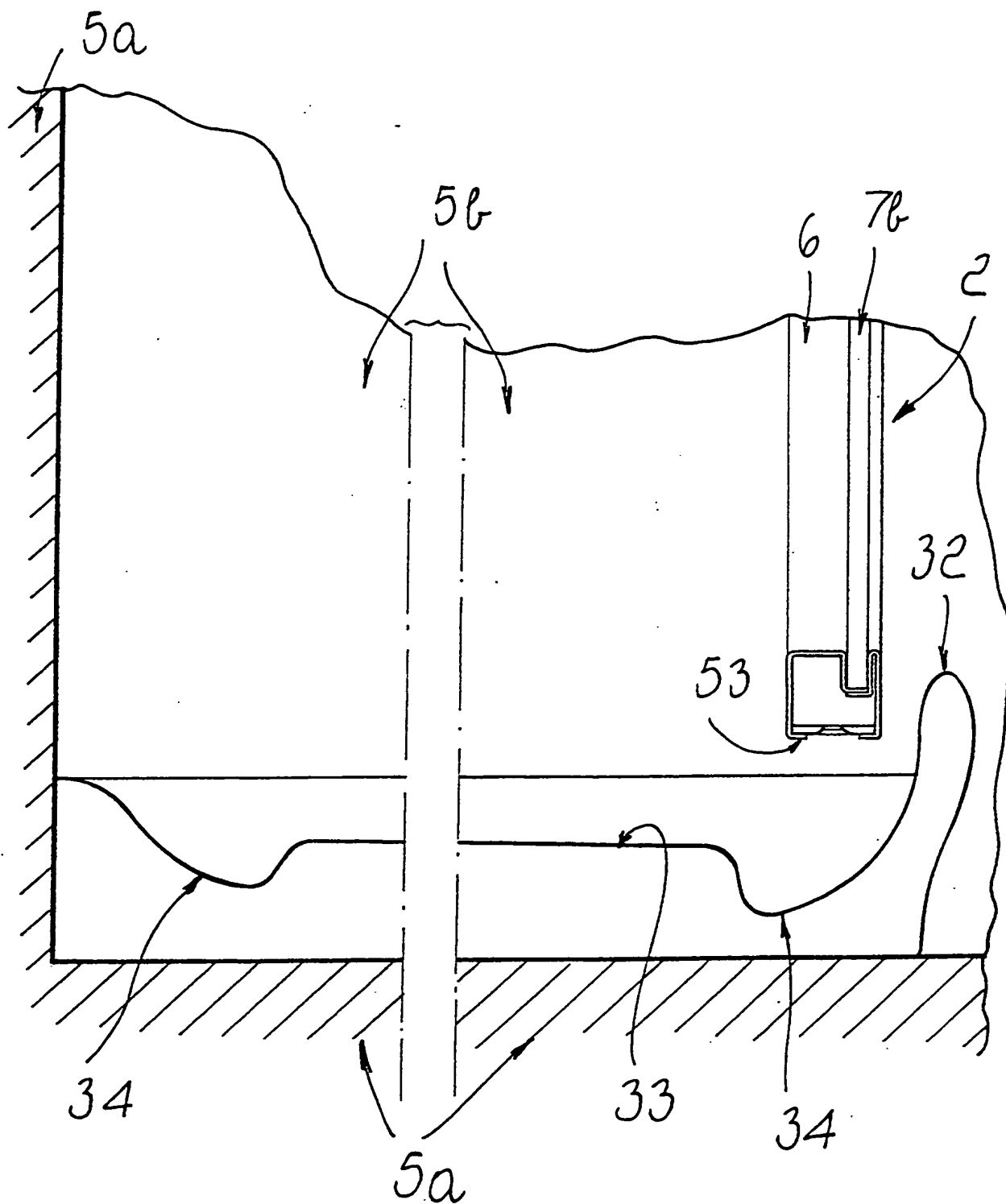


Fig. 8

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>34116/GM/cb</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP 00/ 11159</b>	International filing date (day/month/year) <b>10/11/2000</b>	(Earliest) Priority Date (day/month/year) <b>18/11/1999</b>
Applicant  <b>CALIBE S.R.L. et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1  
☐ None of the figures.

# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 00/11159

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 A47K3/36

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 A47K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 36 00 945 A (BEUTEL-WALDEMAR) 23 October 1986 (1986-10-23)	1,15-19
A	page 10, line 22 -page 11, line 30; figures 1,2	2
A	WO 95 19131 A (KOHLEH CO) 20 July 1995 (1995-07-20) page 5, line 2 -page 6, line 7; figures 1,2	1-6

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

13 February 2001

Date of mailing of the international search report

20/02/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax (+31-70) 340-3016

Authorized officer

Vrugt, S

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 00/11159

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 3600945	A	23-10-1986	NONE	
WO 9519131	A	20-07-1995	CA 2181536 A	20-07-1995
			DE 69506843 D	04-02-1999
			DE 69506843 T	05-08-1999
			DE 69513198 D	09-12-1999
			EP 0740519 A	06-11-1996
			EP 0799594 A	08-10-1997
			ES 2129195 T	01-06-1999
			US 5694722 A	09-12-1997
			US 6023889 A	15-02-2000

## TENT COOPERATION TREATY



From the RECEIVING OFFICE

**PCT**

To:

Modiano, Guido  
MODIANO & ASSOCIATI  
Via Meravigli, 16  
I-20123 Milano  
ITALIE

NOTIFICATION OF THE INTERNATIONAL  
APPLICATION NUMBER AND OF THE  
INTERNATIONAL FILING DATE

(PCT Rule 20.5(c))

Date of mailing  
(day/month/year)

14 12 2000

Applicant's or agent's file reference

34116/GM/cb

IMPORTANT NOTIFICATION

International application No.

PCT/EP 00/ 11159

International filing date (day/month/year)

10/11/2000

Priority date (day/month/year)

18/11/1999

Applicant

CALIBE S.R.L.

Title of the invention

1. The applicant is hereby notified that the international application has been accorded the international application number and the international filing date indicated above.
2. The applicant is further notified that the record copy of the international application was transmitted to the International Bureau on the above date of mailing.
3. ☐ Other:

\* The International Bureau monitors the transmittal of the record copy by the receiving Office and will notify the applicant (with Form PCT/IB/301) of its receipt. Should the record copy not have been received by the expiration of 14 months from the priority date, the International Bureau will notify the applicant (Rule 22.1(c)).

Name and mailing address of the receiving Office



European Patent Office, P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

H.A.M.W. ter Haar

PCP

# REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

Receiving Office use only  
PCT/EP 00 / 11159

International Application No.

10 NOV 2000

(10.11.2000)

International Filing Date

EUROPEAN PATENT OFFICE  
PCT INTERNATIONAL APPLICATION

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) 34116/GM/cb

Box No. I TITLE OF INVENTION  
SHOWER APPARATUS

Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

CALIBE S.r.l.  
Via Provinciale, 116  
40056 CREPELLANO  
ITALY

☐ This person is also inventor.

Telephone No.

Facsimile No.

Teleprinter No.

State (that is, country) of nationality:

IT

State (that is, country) of residence:

IT

This person is applicant for the purposes of:

☐ all designated States

☒ all designated States except the United States of America

☐ the United States of America only

☐ the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

MONTANARI Filippo  
Via Provinciale, 116  
40056 CREPELLANO  
ITALY

This person is:

☐ applicant only

☒ applicant and inventor

☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

IT

State (that is, country) of residence:

IT

This person is applicant for the purposes of:

☐ all designated States

☐ all designated States except the United States of America

☒ the United States of America only

☐ the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☒ agent

☐ common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

MODIANO Guido  
MODIANO & ASSOCIATI  
Via Meravigli, 16  
20123 MILAN - ITALY

Telephone No.

(003902) 8692442

Facsimile No.

(003902) 863860

Teleprinter No.

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.



## Box No.V DESIGNATION STATES

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

## Regional Patent

- ☒ AP ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ EP European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

National Patent (if other kind of protection or treatment desired, specify on dotted line):

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> AE United Arab Emirates                  | <input checked="" type="checkbox"/> LC Saint Lucia                               |
| <input checked="" type="checkbox"/> AG Antigua and Barbuda                   | <input checked="" type="checkbox"/> LK Sri Lanka                                 |
| <input checked="" type="checkbox"/> AL Albania                               | <input checked="" type="checkbox"/> LR Liberia                                   |
| <input checked="" type="checkbox"/> AM Armenia                               | <input checked="" type="checkbox"/> LS Lesotho                                   |
| <input checked="" type="checkbox"/> AT Austria                               | <input checked="" type="checkbox"/> LT Lithuania                                 |
| <input checked="" type="checkbox"/> AU Australia                             | <input checked="" type="checkbox"/> LU Luxembourg                                |
| <input checked="" type="checkbox"/> AZ Azerbaijan                            | <input checked="" type="checkbox"/> LV Latvia                                    |
| <input checked="" type="checkbox"/> BA Bosnia and Herzegovina                | <input checked="" type="checkbox"/> MA Morocco                                   |
| <input checked="" type="checkbox"/> BB Barbados                              | <input checked="" type="checkbox"/> MD Republic of Moldova                       |
| <input checked="" type="checkbox"/> BG Bulgaria                              | <input checked="" type="checkbox"/> MG Madagascar                                |
| <input checked="" type="checkbox"/> BR Brazil                                | <input checked="" type="checkbox"/> MK The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> BY Belarus                               | <input checked="" type="checkbox"/> MN Mongolia                                  |
| <input checked="" type="checkbox"/> BZ Belize                                | <input checked="" type="checkbox"/> MW Malawi                                    |
| <input checked="" type="checkbox"/> CA Canada                                | <input checked="" type="checkbox"/> MX Mexico                                    |
| <input checked="" type="checkbox"/> CH and LI Switzerland and Liechtenstein  | <input checked="" type="checkbox"/> MZ Mozambique                                |
| <input checked="" type="checkbox"/> CN China                                 | <input checked="" type="checkbox"/> NO Norway                                    |
| <input checked="" type="checkbox"/> CR Costa Rica                            | <input checked="" type="checkbox"/> NZ New Zealand                               |
| <input checked="" type="checkbox"/> CU Cuba                                  | <input checked="" type="checkbox"/> PL Poland                                    |
| <input checked="" type="checkbox"/> CZ Czech Republic                        | <input checked="" type="checkbox"/> PT Portugal                                  |
| <input checked="" type="checkbox"/> DE Germany                               | <input checked="" type="checkbox"/> RO Romania                                   |
| <input checked="" type="checkbox"/> DK Denmark                               | <input checked="" type="checkbox"/> RU Russian Federation                        |
| <input checked="" type="checkbox"/> DM Dominica                              | <input checked="" type="checkbox"/> SD Sudan                                     |
| <input checked="" type="checkbox"/> DZ Algeria                               | <input checked="" type="checkbox"/> SE Sweden                                    |
| <input checked="" type="checkbox"/> EE Estonia                               | <input checked="" type="checkbox"/> SG Singapore                                 |
| <input checked="" type="checkbox"/> ES Spain                                 | <input checked="" type="checkbox"/> SI Slovenia                                  |
| <input checked="" type="checkbox"/> FI Finland                               | <input checked="" type="checkbox"/> SK Slovakia                                  |
| <input checked="" type="checkbox"/> GB United Kingdom                        | <input checked="" type="checkbox"/> SL Sierra Leone                              |
| <input checked="" type="checkbox"/> GD Grenada                               | <input checked="" type="checkbox"/> TJ Tajikistan                                |
| <input checked="" type="checkbox"/> GE Georgia                               | <input checked="" type="checkbox"/> TM Turkmenistan                              |
| <input checked="" type="checkbox"/> GH Ghana                                 | <input checked="" type="checkbox"/> TR Turkey                                    |
| <input checked="" type="checkbox"/> GM Gambia                                | <input checked="" type="checkbox"/> TT Trinidad and Tobago                       |
| <input checked="" type="checkbox"/> HR Croatia                               | <input checked="" type="checkbox"/> TZ United Republic of Tanzania               |
| <input checked="" type="checkbox"/> HU Hungary                               | <input checked="" type="checkbox"/> UA Ukraine                                   |
| <input checked="" type="checkbox"/> ID Indonesia                             | <input checked="" type="checkbox"/> UG Uganda                                    |
| <input checked="" type="checkbox"/> IL Israel                                | <input checked="" type="checkbox"/> US United States of America                  |
| <input checked="" type="checkbox"/> IN India                                 | <input checked="" type="checkbox"/> UZ Uzbekistan                                |
| <input checked="" type="checkbox"/> IS Iceland                               | <input checked="" type="checkbox"/> VN Viet Nam                                  |
| <input checked="" type="checkbox"/> JP Japan                                 | <input checked="" type="checkbox"/> YU Yugoslavia                                |
| <input checked="" type="checkbox"/> KE Kenya                                 | <input checked="" type="checkbox"/> ZA South Africa                              |
| <input checked="" type="checkbox"/> KG Kyrgyzstan                            | <input checked="" type="checkbox"/> ZW Zimbabwe                                  |
| <input checked="" type="checkbox"/> KP Democratic People's Republic of Korea |  |
| <input checked="" type="checkbox"/> KR Republic of Korea                     |  |
| <input checked="" type="checkbox"/> KZ Kazakhstan                            |  |

Check-box reserved for designating States which have become party to the PCT after issuance of this sheet:



**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)

<b>Box No. VI PRIORITY CLAIM</b>		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) 18 NOVEMBER 1999 (18.11.99)	TV99A000127	ITALY		
item (2)				
item (3)				

☐ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s):

\* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

**Box No. VII INTERNATIONAL SEARCHING AUTHORITY**

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA / EP

Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year)

Number

Country (or regional Office)

**Box No. VIII CHECK LIST; LANGUAGE OF FILING**

This international application contains the following number of sheets:

request : 3  
description (excluding sequence listing part) : 8  
claims : 3  
abstract : 1  
drawings : 6  
sequence listing part of description : \_\_\_\_\_

Total number of sheets : 21

This international application is accompanied by the item(s) marked below:

1. ☐ fee calculation sheet
2. ☒ separate signed power of attorney (two)
3. ☐ copy of general power of attorney; reference number, if any:
4. ☐ statement explaining lack of signature
5. ☐ priority document(s) identified in Box No. VI as item(s):
6. ☐ translation of international application into (language):
7. ☐ separate indications concerning deposited microorganism or other biological material
8. ☐ nucleotide and/or amino acid sequence listing in computer readable form
9. ☐ other (specify):

Figure of the drawings which should accompany the abstract: 1

Language of filing of the international application:

ENGLISH

**Box No. IX SIGNATURE OF APPLICANT OR AGENT**

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

Milan, Italy -

November 3, 2000

MODIANO Guido

For receiving Office use only		2. Drawings: <input checked="" type="checkbox"/> received: <input type="checkbox"/> not received:
1. Date of actual receipt of the purported international application:	10 NOV 2000 (10.11.00)	
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:		
4. Date of timely receipt of the required corrections under PCT Article 11(2):		
5. International Searching Authority (if two or more are competent): ISA /	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.	

Date of receipt of the record copy by the International Bureau:

For International Bureau use only

## PATENT COOPERATION TREATY

8

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

MODIANO, Guido  
Modiano & Associati  
Via Meravigli, 16  
I-20123 Milan  
ITALIE

Date of mailing (day/month/year) 09 January 2001 (09.01.01)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference 34116/GM/cb	
International application No. PCT/EP00/11159	
International publication date (day/month/year) Not yet published	
Applicant CALIBE S.R.L. et al	International filing date (day/month/year) 10 November 2000 (10.11.00)  Priority date (day/month/year) 18 November 1999 (18.11.99)

- The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
- An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
18 Nove 1999 (18.11.99)	TV99A000127	IT	27 Dec 2000 (27.12.00)

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

S. Mandallaz

Telephone No. (41-22) 338.83.38

## TENT COOPERATION TREATY

9

From the INTERNATIONAL SEARCHING AUTHORITY

**PCT**NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

(PCT Rule 44.1)

To:

MODIANO & ASSOCIATI  
Attn. Modiano, Guido  
Via Meravigli, 16  
I-20123 Milano  
ITALYDate of mailing  
(day/month/year)

20/02/2001

Applicant's or agent's file reference

34116/GM/cb

**FOR FURTHER ACTION**

See paragraphs 1 and 4 below

International application No.

PCT/EP 00/11159

International filing date  
(day/month/year)

10/11/2000

Applicant

CALIBE S.R.L. et al.

- 1.
- ☒
- The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.**Where?** Directly to the International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland  
Facsimile No.: (41-22) 740.14.35**For more detailed instructions, see the notes on the accompanying sheet.**

- 2.
- ☐
- The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

- 3.
- ☐
- With regard to the protest**
- against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

- 4.
- Further action(s):**
- The applicant is reminded of the following:

Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.Within **19 months** from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).Within **20 months** from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority

European Patent Office, P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Joëlle Gerber